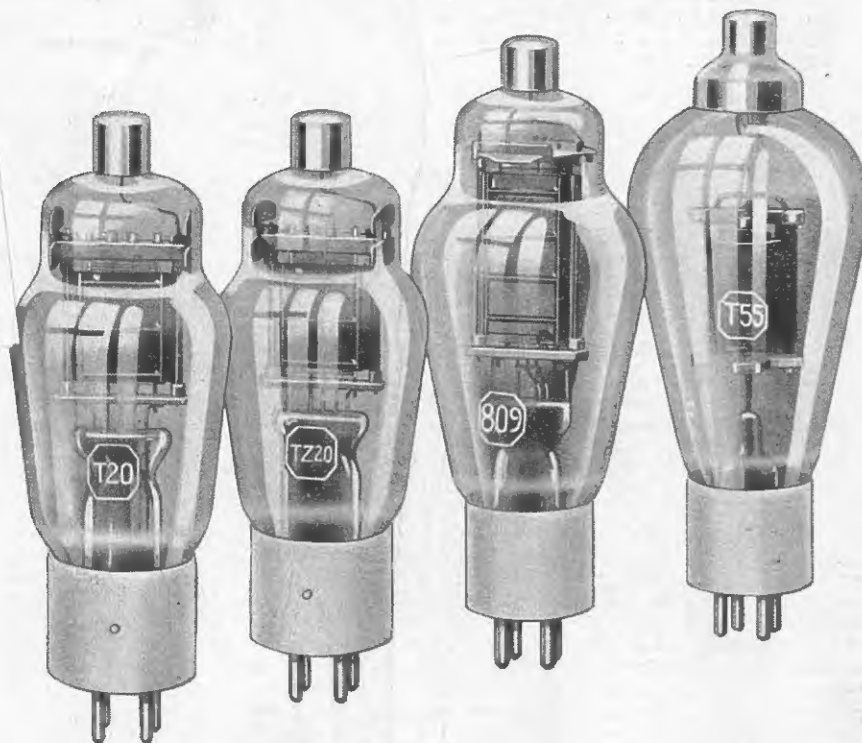


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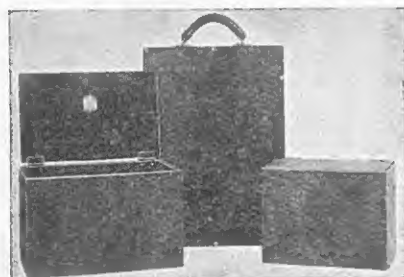
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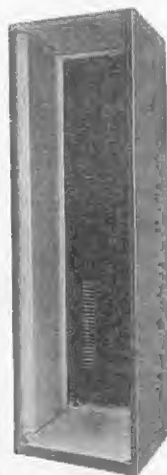
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XTAL

PUBLISHED MONTHLY

BY

THE VE OPERATORS' ASSOCIATION

AT

106 JARVIS STREET

TORONTO, ONTARIO, CANADA



What Are We and Who?

Friends, we thank you for the enthusiastic reception accorded the return of XTAL, and for the support all sections of the Dominion have assured us will be given to the magazine and to the VE Operators' Association.

To accomplish that which we have set out to do will entail much thought and labor, but the task will be lighter and the work more pleasant because of the many splendid letters of appreciation and encouragement we have received. It has been gratifying and illuminating to study your communications, and to discover that across Canada there is a unanimous opinion that a Canadian association and a Canadian magazine are desirable. From your expressions it appears that the time of our launching was most propitious and, therefore, we face the future with an optimism made possible by your opinions, suggestions and eagerness to assist.

While it is beyond the space limits of XTAL to publish your kind letters, we nevertheless feel that hams generally will be interested in learning of the other fellow's point of view, so we condense, herewith, some representative salient references picked from a few of the communications we have received.

Of XTAL: — "You have something there . . . it will go a long way . . . very fb . . . fill long-felt need . . . issue is the tops . . . keep ham politics and half-baked technical articles out . . . I think it is swell . . . up-to-date advertisements and prices are worth membership dues to a distant ham away from buying centres . . . certainly enjoyed every word . . . behind it all the way . . ."

Of VE Operators' Association: — "I heartily endorse . . . high time we were organized . . . on the right track . . . too long without organized representation . . . wonderful idea . . . we need to be

united . . . three cheers for the new association . . . headed in right direction . . . no better way to build than manner started . . . need association that sees things from Canadian point of view . . . we must be affiliated with A.R.R.L. . . . do not care to have anything to do with association that is affiliated with A.R.R.L. . . . something operators have wanted . . . should have representatives in each province . . . members should vote on referendum only . . . am very much in favour of it . . . sure need VE association . . . fully in accord . . . organization would carry weight . . . ideas outlined are essentials for preservation of hobby . . . Canadian hams should be served by a Canadian association . . . should get 100% support . . . here's my dollar . . . give us more details . . . it must have no cliques . . ."

We have had so many requests for further information regarding the association that we have a deepening impression that the question had national conception. In view of the duplication of that demand, and in consideration of the rather serious aspect of a clique angle we are going to confine this editorial to commenting upon those two points.

Admittedly, our April article did not go to great detail in the matter of the association or its organizers, but rather confined itself to sketching a picture of to-day's position and suggesting something in the way of an association would be an asset. We expressed an idea hoping it would arouse your interest, and it succeeded admirably. That we did not go into further detail was due to the fact that the association — in the matter of establishing policy and kindred considerations — has advanced only to the point we wish to have it advance at present.

In brief, the sponsors are dealing with a general principle, but it is the preroga-

tive of members to decide the details. We have neither the desire nor the intention of usurping your rights.

One correspondent has wisely suggested the avoidance of cliques, and that is a fear that must be immediately dispelled. The group who are fostering the VE Operators' Association are men who are so busily engaged in the workaday world that they have no time to spare for any enterprise which is not founded on sincerity. Nevertheless, they are somehow managing to find time one way or another to devote to the formation of a Canadian association, and are bringing to the effort, experience gained from years of membership in fraternal societies, business associations, social clubs and other forms of organized activities.

We dislike claiming a virtue for ourselves (we would certainly refrain from doing so if we had any doubts about our subsequent actions standing as conclusive evidence of the fact that we are being motivated by a sincere interest in Canadian amateur radio) but we must say in fairness to you, and to ourselves, that we are absolutely sincere in our efforts at organization. We are not members of a clique, and we have positively no use or time for cliques. We would like that to be definitely understood. We are simply a group of amateurs who seeing a necessity, are doing everything possible to put across an idea which has presented itself from the recognition of the necessity.

Other than the satisfaction that comes from accomplishment, and beyond the hope that we shall be members of what will eventually prove to be a strong Canadian association, there is nothing in it but work, then more work. We have neither fish to fry, nor axes to grind; we are no better than the other fellow, and we have no false illusions about capabilities, but we have a number of things in common which seems to make it reasonable for us to pursue our idea. In short, we are just plain, common, every-day hams the same as 3,400 other souls in Canada, but somebody had to put the ball in motion, and it seemed to us to be perfectly logical that much more would be accomplished in the way of organization by a small group who are centralized to the extent that frequent meetings and contacts would be possible. Events have proved this to be true.

Now, as to association, it may be said that your organizers are approaching their undertaking with the definite point

of view that the VE Operators' Association must be the very essence of democracy, and in order to ensure that it shall be so we are preserving a pliability which will be yours to mould when the constitution, details of procedure and policy are being determined.

In other words, the association will be what it is because you, and you, and you have expressed your opinions. Members across the Dominion will determine their own rights, privileges and obligations, method of voting, and composition of the Executive Committee. They will, in fact, erect the association and its details, upon the foundation of general principle laid by the present group. We cannot conceive of any plan of organization which would offer more in the way of fairness, especially when our potential membership is scattered over an area the size of Canada.

We have a constitution at the moment — a sketchy affair — that provides for its own amendment. This means that later it can be scrapped to be replaced by a more comprehensive work. Obviously, we required some sort of provisional authority to prevent us from straying on to by-roads, and to ensure a continuity of purpose, and to ensure, also, that a later inspection of our stewardship will show authority for all our actions.

So, friends, you see the reason our April editorial offered so little in the way of details. We didn't know then, and we don't know now just what you are going to make out of our general idea. We don't know who the members of the Executive will be, but we offer the suggestion that they should be drawn from the best material available, and that they should so serve because of some outstanding qualification that makes them particularly suited for such service. When the committee is established, we presume it will give consideration to all suggestions received, and then communicate with our membership, but whatever they do, certain it is that you will have the opportunity of registering your opinions. Then, and then only, will we be able to give you an effective answer. That is our idea of a democratic association.

In the meantime, we again suggest that you send in your ideas, opinions and suggestions so that we may log them for full consideration, reference and guidance.

Friends, is there anything wrong with our present procedure or ideas on organization?

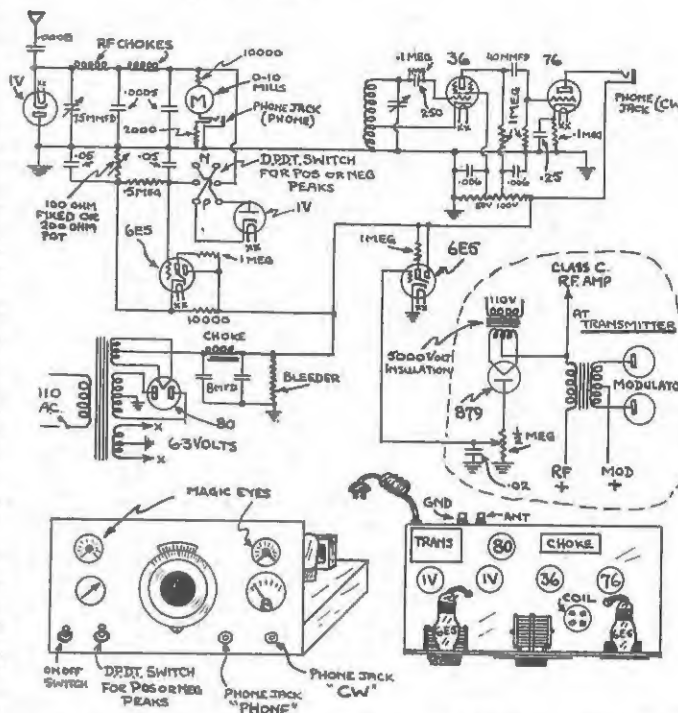
JULY 1st, 1938

By VE3BD

No! This may not mean a holiday; it may mean work. The new licenses which we have, or have seen, by this date, bring out beside frequency changes the fact that we are now specifically required to have a frequency meter both for CW and phone stations, and also a means of visually indicating overmodulation for the phone operated stations. This means we must do something about it, and do it before July 1, and now is the time, if we have not already started.

The frequency meter item is standard, as we all have some arrangement for that purpose. However, the unit herein described contains: 1. Frequency meter. 2. CW Monitor. 3. Overmodulation indicator. 4. Carrier shift indicator. 5. Phone monitor. Since we all have a frequency meter, the modulation indicator is the vulnerable item. Contrary to common opinion, a cathode ray oscilloscope is not required, and, as a matter of fact, is difficult and not to be recommended for this use, although it would serve the purpose if properly interpreted. Another point is that a diode rectifier indicating carrier shift is not a true modulation indicator, as overmodulation is one of the minor causes of carrier shift. This carrier shift comes from such a contributing cause as too tight or too loose antenna loading, insufficient excitation, audio mismatch, or improper audio waveform. What is wanted is a continuously operating modulation indicator, which should be some type of rectifier indicating when the audio peaks are such that the carrier is cut off.

The unit shown uses a Magic Eye as an indicator, as for speech a meter is much too slow to indicate these modulation peaks. Carrier shift is indicated on a millimeter. The construction and



operation is straightforward and simple, the frequency meter circuit, the old reliable, needs little explanation. The modulation indicator uses diode rectifiers and a Magic Eye. The meter using the first rectifier for carrier shift and phone monitor. The second rectifier to check the negative and positive peaks, indicating of the Magic Eye. In operating the modulation indicator the unit should be running first with the transmitter off, and it will be found that the Magic Eye closes to a value dependent on the value of the cathode resistor. A 200 ohm rheostat was used in this set-up to provide adjustment of the amount of closing which should be about 1/4" gap; a 100 ohm resistor will be about right, but a variable resistor makes the unit more flexible. This gap should be set and noted, then, with the transmitter on, this gap will widen and when modulated will close, and if on modulation, the gap is less than when the transmitter is off, it indicates overmodulation. Sufficient coupling to the antenna feeders should be provided to give about five mils. on (Continued on page 14)

Ham On The Range

By VE3PL/VE4TA

How would you like to have a location on the wide open prairie, in one of the few remaining areas of rangeland in Canada? Here one can gaze for miles across gently rolling grassland and see no house or even fence or road. Here you could build a whole series of rhombic beam arrays, or any other elaborate, space-consuming antenna system that took your fancy. Such conditions exist in parts of southern Alberta, and it is there that I have had my QTH for the past four summers. My friends of the VE3 gang have the impression that I was out there to hunt fossils, but actually I was there for the Geological Survey, and surveying was mostly what we did. Possibilities of gas and oil fields was the reason for being in the area, and collecting fossils was incidental. All during this time I had some sort of portable transmitter with me, operating under the call VE4TA, and boy, did I have fun!

Yes, I could have had miles of antenna, as far as space was concerned, but the catch was the masts, which would have to be portable too. I limited myself to one mast, of the old standby two-by-four arrangement described for so many years in the Handbook. This could be dismembered and carried with the tent poles when moving camp. Put together again, it was not hard to raise (with three or four husky assistants to do the lifting). We guyed it six ways with ropes to iron pegs, but twice the prairie zephyrs blew it down, and once a mule kicked it down, though just what he had against amateur radio I still don't know. For almost the entire period I used an end-fed antenna, 132 feet long, running up obliquely from the tent to the mast. The lead-in arrangements were primitive, and when lightning threatened, a good wallop with a broom handle would disconnect and ground the antenna. Toward the last I got fussy, and put up a nice Zepp, but didn't notice much improvement in results.

Each summer a different type of transmitter was used, to learn as much about portable rigs as possible. This is not intended as a technical article, so I shan't describe them, but I might say that I found the triodes (71A, 76) preferable to the multi-element tubes (89, 802, 6L6). For phone, suppressor-grid modulation is attractive, but for these low powers, simple class A plate modulation, with a

41 or 42, seems more effective. Crystal control is absolutely essential, for winds will blow, and lead-ins will flap, and self-excited notes will run up and down the scale like a lyric soprano. And in portable operation you must have very solid hook-up connections. On one occasion I called and called, but nobody answered. Finally, an heroic W7 came back, and explained that my note sounded like a stuttering canary. Investigation found the plate by-pass condenser vibrating against its connection every time I hit the key. Power supplies are the big problem on portable installations. I used 180 volts of B battery the first summer, and after that various vibrator power packs running on the car battery. The receivers used were of the simplest types, with 2-volt battery tubes and just detector and audio stages. Miles away from all types of man-made QRN, these little rigs pull 'em in almost as well as a fancy superhet.

The VE4's are a grand gang, and they rallied round in style to help me with my tests. I can't mention them all, but most valuable assistance was given by VE4BZ and VE4AF on CW and by VE4EO, VE4OF and VE4JJ on phone. The Alberta boys kid each other unmercifully, and VE4TA was not exempt, but I got my own back once or twice by setting up the rig alongside somebody's shack and pounding in on him until discovered. Most of the time the outfit was used purely for ham QSO's, testing out the possibilities of these low power transmitters. Naturally, however, when our camp was more or less isolated, I often found the radio my only means of communication. Some of my messages relayed to Ottawa caused amusement to my superiors on the Survey, for my radio experiments were not always taken seriously there. Once I needed an extra man, so during a QSO with VE4AF I hired him! He joined one of my sub-parties and put up a rig of his own, and then did we go to town! Almost every morning, before breakfast, we were QSO, and valuable information went back and forth. Sometimes it was pretty cold in the tent, so I stayed in bed and worked the key with one arm projecting from the covers.

My best operating was on Sundays, when I could work on through the morn-

(Continued on page 10)

Station Activities

B.C. SECTION
S.C.M. — VE5HP

This time we are entangled in another contest and not much news is forthcoming. Really, fellows, I need more help to make this report representative of the section as a whole, and again ask you to send me some scandal on the ham next door, seeing as how you won't talk about yourselves. The W-VE contest is over and all those strange calls will vanish from the bands for another year. Conditions were very poor this year, and that, added to the natural handicap we have out here competing with the central boys, made the going slow for most stations, but we hear rumors of big scores; nice work if they made it. Rebuilding seems to be the rage these days; AM, CD, DO, RV and NI are reported cooking up new rigs, and same source says JF got new buggy instead of new rig. OT has new 80-foot tower with signal squirter on top, works four new European countries first night. VO is another fellow who is going places; rumor has it that he contacted the new station at Pitcairn Island. CH is trying to get the wrinkles out of his Johnson Q. SW has three rigs and two ops in contest. Seems to be a big demand for 809 tubes. AC has one, also HR, while DV and PO have grief with theirs. ADI is another 809er and works easterners with xtal osc. If you have tlc for east SW, PW and UK want it. 160 metre fone seems to be getting very popular, many new calls, including AAC, SS, AEA, IB, ADB, being heard around town, and are the B.C.L's. taking a beating?

IL takes sea voyage, but not for his health. BJ handles nice QRR when commercials get stuck. Speaking about antennas, MK has three half waves on 160. HP building oscilloscopes and similar foolishness. DV and EZ install transmitters for Y.M.C.A. Hobby Fair.

ONTARIO SECTION
S.C.M. — VE3SG

EF is back after ten years inactivity, has 6L6G's with 30 watts and is contemplating traffic work. KW is rebuilding for 14 mc fone work and will have 450 watts, but his call looks like a whole kilowatt. AEW is active on 1.75 mc fone and 3.5 mc CW. ARX is newcomer in Simcoe. The S.C.M.'s. home town, Streetsville, now sports a couple of resident hams in ASP and ASZ, so now he will have competition when he takes a portable there in the summer. AMP is using quite low power on 1.75 mc fone. ADV is still dxing on 14 mc C.W., but finds Africa hard to raise for WAC. He would appreciate it if ZS stations would keep an open ear on 14,366 kcs. AJS says he is going off fone until he can copy 25 w.p.m. AOP hopes to get on 3.5 mc C.W. soon. AMC is QRL service work. XQ climbed up his skywire mast after someone cut his skywire down. AOL has e. c. rig and cruises around 3.5 mc band. RW changes frequency by grinding his xtal with a file. EG hopes to get on the air as soon as his yllitis abates or improves (we are not sure which). AAR has 2.5 watts on 1.75 mc fone — keep an ear open for

APPLICATION FORM VE Operators' Association

I hereby make application for membership in the VE Operators' Association. One dollar is enclosed for one year's fees and subscription for XTAL —or— Three dollars is enclosed for one year's fees and subscriptions for XTAL and QST.

Name..... Call.....

Address

Proficiency Certificate No. Station License No.

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him, gang; he hasn't heard yet. AQZ (Bob) is on 3.5 mc CW with a 6L6 tritet and can't figure why it won't double to 7 mc. SD, AD, IR, ES, GT, VS, ABD, IW, AET, ZE and many others around Toronto put on a great battle to beat each other in the VE/W Contest. GT claims he is no longer champ 'cause the Northern Lights cut down his range to the B.C.L. next door. ADZ skeds his father BB and uncle GG every Sunday and works lots of dx on 14 mc—with the old 47-pr 46-211 combination. HW has an 803 in the final, a home-made s.s. receiver and very QRL married life, hi. JO is new in Bracebridge, is handling tfe and working for O.R.S. HE in Stratford, is interested in O.R.S. JR, Toronto Short Wave Club station, is on 160 fone with flea pup power. OI is cooling his heels while waiting for the R.I. to O.K. the rig for 14 mc fone. NA has been working lots of dx on 14 mc and has promised to wind 3.5 mc coils before long. ABC has been installing high-power rigs for Canadian Marconi at Red Lake, Pickle Lake and points north. QU is rebuilding. ANA has a new receiver. ALK works VE1 mobile on five metres — but VE1 was mobile at the front door. ADO has five-metre circuit working with Buffalo. PL has been getting quite active on five meters. TO has been working dx on 3.85 mc fone. MZ has been getting friendly with the VK's on 14 mc fone. DC is snagging them on 28 mc. ATO and AUF are newcomers in Hamilton. Hamilton Amateur Radio Club have moved to McMaster University. Byron Goodman, W1JPE, visited Hamilton and Toronto clubs and left behind a very good impression. IA is back again. VZ is on the S.S. Massey for the season. AOR reports for the Hamilton gang. AKT has a rotatable beam. 2DU and his xyl visited MB. 9AK has been running test skeds with MB on a small portable to be used out west this summer. SS would like to see more 56 mc activity in the Niagara peninsula. ALH is "alternate" on two trunk lines.

VANALTA DIVISION REPORT

MARCH 16 TO APRIL 15

ALBERTA SECTION

VE4GE, S. JAMIESON, SCM

HV QRL exams. AH on 40 metres, and worked VK; will rebuild relay rack. NU new call in city; no rig on air yet. VJ, we are glad to report, has recovered from his sickness and is talking ham news again. ADD trying out new 5-metre rig; will erect flat-top beam. AHY rebuilding, but on again soon.

AEA working on new super. AEN added output stage to receiver and discards the cans. QX QRL exams; wins scholarship at Varsity; congrats, Fred. HJ installs new antenna change-over switch. BW sold his rig again and is QRL for week or so. AKK active as usual on 40 metres. ABW works VK's and enjoys rag-chews. XF raises input on 45's to 75 watts. AGZ steps power up to 40 watts. EA will be first Edmonton fone to have modulation monitor. FR has fb sig on 20. LQ worked KA1 on fone and got 57. HM gets on 75 metres late at night; grinds xtals for Alta. net. BV will be on 75 again soon, after long QRX. PH heard on 80 metres. AJM hits ten. YD gets new pair T20's and back on again after lay-off. KK back on 75 metres with rebuilt speech equipment. ACF gets unlimited fone ticket. AEV says it won't be long now. ALO is new call at Blackie. Where are ABH and BP? RV works VK on 20-metre fone with 3.5 watts input to final. TY is Alta. end of fb line to coast. AMN new amateur at High River. QK has antenna troubles. KP soon to blow dust out of mike from Bonnyville. LX back and will take up duties of trunk line station. GE enables 3IX, Toronto, to talk to his brother, a traveller. AF is showing signs of life after all these months.

Traffic: VE4TY 45, LQ 36, LX 34, GE 30, QK 13, AAZ 11, ACF 10.

HAMFEST

The Ottawa Amateur Radio Transmitting Association are sponsoring a Hamfest on June 19th, at Ault's Park, on Shiek Island, about five miles west of Cornwall, on Highway No. 2, or turn south just east of the village of Mille Roches, about 1½ miles east of the QRA of Daddy Dawes, VE3NM, at Moulinette, which you cannot miss. Everything will be under way by 10.30 a.m. and will last all day. Sporting events, hidden xmtr hunts for both 80 and 5 meter portable gear, all important prize drawing and other events will round out a more than worthwhile Hamfest. Don't miss this event.

TUBE MANUALS

Technical manuals covering receiving tubes and amateur transmitting tubes, giving fundamentals of tube design, construction and application, receiver, transmitter and power supply circuits, and useful formulas, may be obtained by writing Canadian General Electric Co., Data Section, attention W. J. Watterson, 212 King St. W., Toronto. The price is 25 cents each manual.

RE XTAL

To demonstrate that this, your magazine, is the result of the "of, by and for" amateur idealism applied, we outline the details of production of each issue of XTAL. Each task is allotted to a member who is particularly conversant with it, so that publication is achieved with the smallest total effort, a consideration not inconsequential to a co-operative venture to be accomplished in the not too plentiful spare time of working men—married men—hams—gardeners.

The advertising manager is 3GT. He allots local advertising prospects, to be canvassed personally, to ACL, ADO, PL, RF, SG, VD and WK. All advertising correspondence is taken care of by himself, and he handles all copy and proofs.

At an association meeting the subject of the editorial is decided upon, and 3APS is the editorial writer. His copy is read by several members, and when changes, if any, are made, the revised copy is taken as an expression of the opinion and views of the association. These articles are, therefore, unsigned, and credit is herewith given to 3APS for an excellent job.

All reading matter copy goes to 3ZE for editing. He and 3GT then make up dummy and O.K. page proofs.

The mailing list, so far, has been typed by 3SG, 3GT, and 3APS, and there are 3,400 odd to type(!)

The whole gang meets to get XTAL in the mail. Stamps and stickers for over 3,400 XTALs, and here it is.

It is our earnest desire that the contents shall be what you would like to see in it. We shall not know unless you tell us.

We think there should be one technical article each issue, not on how to build a kilowatt rig, but on something useful to and within the financial reach of the average VE ham.

The greatly augmented number of VE participants in the recent VE/W contest is conclusive evidence that they have not been generally informed of former tests, and in future all impending tests of which we are aware will be announced.

Station activities reports, we believe, are of general interest. The appointment or election of a XTAL correspondent in each province is now under consideration.

To be helpful to other hams, and not merely a little personal bragging, lists of dx stations worked should contain frequencies and time of day worked. Do

you think XTAL should have a dx department?

It is our opinion that any meeting or event which may interest a hundred or so hams is well worth space even in a national publication, and clubs are cordially invited to take advantage of this publicity medium.

We wish to emphasize that in a country of such geographical extent it is impossible for anyone to be conversant with conditions and circumstances in the farther sections. There is no one harder to get along with than the chap who will not let you know if he thinks along with you, against you, or even thinks. We urge each of you, therefore, if you agree with the outline of the future of XTAL, say so; if you don't, say so. We assure you every communication will receive full consideration.

VE3ZE

PROVINCE OF ONTARIO } In the matter of the
COUNTY OF YORK } circulation of XTAL
magazine

TO WIT:

I, Frederick Henry Berwick Saxon, of the City of Toronto, in the County of York, President of the VE Operators' Association, do solemnly declare:

- 1—That XTAL magazine is published and distributed by the VE Operators' Association;
- 2—That the issue known as April, 1938, being Number 1 of Volume 2, was distributed to 3,446 amateur radio operators in Canada.

and I make this solemn declaration conscientiously believing it to be true and knowing it is of the same force and effect as if made under oath and by virtue of the Canada Evidence Act.

Declared before me at the City of Toronto, in the County of York, this 21st day of April, 1938.

R. MACDONALD,

A Commissioner for taking Affidavits in and for the County of York.

My Commission expires December 4th, 1939.

Congratulations to your
"XTAL"

DYMAC RADIO

216 E. GENESEE ST.

BUFFALO, N. Y.

Largest Distributors of Ham
Equipment in Western
New York

The Three S's

By ERICH BARTMANN, VE3VD

Amateur radio, like all other branches of study, requires that well-known motto, Systematic Scientific Study, or often known as the three S's.

We all would be wise to keep this motto in mind while working away in our stations. Results would be so much more gratifying and helpful, not alone to oneself, but also to the other fellow. Why? Because system is the first principle of science; science is the first principle of study, and study is the first principle of success.

We can never hope to reach a greater success of which we are capable if we are slovenly in our habits of work.

I think we all tend to be in one or the other of two classes in this splendid hobby of ours. The first is OM S (System), and the second, OM H (Haphazard).

OM S makes a careful estimate of the time he has to spend and of the time required to do his work. He keeps a detailed and accurate record of all he does, to show progress. In short, OM S masters his work as he goes along.

Now OM H usually starts off by plunging in headlong without careful study and planning, trusting to luck that all will come out right in the end. He keeps no record of any sort, and works just when the spirit moves him. It means he skips the hard parts, and hopes by good fortune to gain his objective.

We have two types to choose from. Which will it be?

So let us tighten up and give plenty of thought to how we work.

In work we often fail, certainly, but that does not get us down. We tackle it again and win.

Samuel Smiles, late author of many works on industrial enterprise, once wrote: "We learn wisdom from failure much more than from success. We often discover what will do by finding out what will not do; and probably he who never made a mistake never made a discovery."

"KBX CRYSTALS"

As a result of numerous queries, we will shortly place on the market, variable crystals, mounted and guaranteed variation of at least 9 K.C. on fundamental frequency at \$4.95 Net

We have a few experimental models on hand to sell at \$4.00 net while they last. These are identical with the \$4.95 unit except that the holders have no name plates and are not finished to as high a polish. The number of these are limited, so first come first served.

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HAM ON THE RANGE

(Continued from page 6)

ing and into the afternoon. Some of these Sabbath QSO's went on for hours. When skip came on in the evening, it was too sad, for the W6's and their relatives came in all over my poor little squeak. Probably a QSY from 80 to 160 meters would have solved the problem of evening operation, but I never tried it. Static is very bad on the prairies in July and August, and increases to a crescendo as the day advances. Mornings are the only pleasant times to operate during this season.

Most of the time I worked on 80 and 75 meters, with an occasional fling at 40, but last summer I branched out to the 5-metre band. I took along two transceivers, and after we got the numerous bugs out of them they proved of enormous advantage to our work. VE4VX helped greatly in getting these rigs working properly. With two cars in communication by radiophone, our survey traverses went over most difficult ground at remarkable speed. All the old trouble of trying to make the fellow at the other end understand what was wanted, disappeared completely. Such equipment has enormous possibilities in surveying work, but I have been unable to pass my enthusiasm on as yet, for surveyors don't want to be bothered with new-fangled contraptions. Many amusing things happened with the 5-metre rigs. The assistants got a big kick out of them, and wise-cracks flew back and forth on the carriers. The mystification of local residents was also a bit amusing. Not so funny was the time we ran through a dust storm, and the second operator got a hefty jolt from electrical charges on the antenna.

In 1936 I was ordered to attend some meetings in Edmonton, so I motored up from camp and took along the rig and my camera. This trip gave me the opportunity to renew old acquaintances and to make many new ones. Everywhere possible I took pictures, and my collection of VE4 station photographs is rather large. Unfortunately, hams don't leave their rigs alone, so I suppose most of these pictures are now out of date.

I am no longer with the Geological Survey, and it seems probable at this writing that the feeble squeal of VE4TA will be absent from the amateur bands this year. If so, I take this opportunity of sending my regrets to all my good friends in the fourth district. But I'll be back again one of these days, so till then, very 73 and CUL. SK.

JUNE FIELD DAY

We understand that the annual A.R.R.L. party will take place this year from 4 p.m., June 11th, until 7 p.m., June 12th, local time. Exact rules for this year's contest will likely appear in June QST, and it is likely that special multipliers will be used when making up contest results for participating stations using completely self-powered portable equipment, and a smaller multiplier when either the transmitter or receiver is operated portable. When A.C. mains are used we presume only a low power multiplier will apply. Do not forget to get the exact dope from June QST.

During the Field Day contests in the past, numbers of VE clubs and groups have gone out in the field and used portable rigs of one sort or another, with astonishing results, sometimes due to the fact that better locations can be used than when the same rigs are used at home. Besides being in the nature of a contest it is a swell way to test out your portable gear. No matter where you are located, do not overlook the fact that some day you may be called upon to be of service to your fellow-man in case of emergency. It is easy enough to build up a 6L6 oscillator, or a TNT, and even though you can only find a couple of half-dead B batteries to use on the plate you'll find you'll get out, and probably surprisingly well.

Also, there is a cup contested for each year among the VE3's. The club that wins it the third time keeps it for good. So far one group have won it the last two years. Unless some of us get out and win it this year another donor will have to be solicited. Besides, is it fair for the same gang to win it three times in a row? Sure it is, but are we going to allow it? For you fellows who don't like these wild, woolly, sleep-losing frays on the air, this is one where you can couple a real outing with a little radio operating, and, provided you get a break in the weather, it does one a lot of good, especially after we VE's have been indoors all winter. A good dose of hay fever, a few mosquito bites, some sunburn, a cold in the back from ground sleeping, a sprained thumb from ball mis-catching, and sticky, dirty fingers from worm-baiting, and a few other things, all go to do one a lot of good and help round up a perfect week-end in the outdoors. We don't use the radio air, nor do we use the fresh air as much as we might. Here is a grand time to combine the two.

No matter what equipment you use; whether you work one station, one hundred stations, or no stations; whether the photos you took turn out or don't turn out; don't fail to send your results and photos in, either to the VE Operators' Association or to the A.R.R.L. A lot of good ideas can come from swapping ideas and photos as to equipment and results of Field Day activities. XTAL would like to have the photos and the dope. It's up to the gang. However, be on, and send us a message saying who is behind your rigs, even if there isn't time nor energy to write.

Conditions now point towards 7 mc being the popular band for this activity this year. 3.5 mc will be FB if OM static isn't there too. We'll be seein' ya'.

Constitution of the VE Operators' Association

Part of the present Constitution of the VE Operators' Association is submitted herewith, and it will be run as space permits. Upon its completion in these pages our members will send in suggestions and amendments as provided for therein, and after revision it will be reprinted in pamphlet form and supplied to members.

Elsewhere in this issue will be found a membership application form. Particulars asked for are for use on the membership card, which is planned to be used as amateur radio operator identification as well.

CONSTITUTION

1. The name of the Association shall be: "The VE Operators' Association," hereafter called the Association. When the name of the Association shall appear in, or be referred to in public, it may be cited as "The Canadian Amateur Radio Operators' Association."

2. The objects of the Association shall be:

- (a) To foster intelligent, aggressive and serviceable use of amateur radio.
- (b) To further international goodwill.
- (c) To co-operate in the observance and enforcement of amateur radio laws.
- (d) To present non-partisan information on amateur radio activities by operating official broadcasting stations, or by other means as may be deemed expedient.

- (e) To extend assistance towards the clarification of amateur radio problems.
- (f) To guard and further the radio interests of every Canadian amateur radio operator.
- (g) To promote contests and other such activities as are deemed to give effect to the objects of the Association in the furtherance of the interests of Canadian amateur radio operators.
- (h) To promote the cultural and recreational use of leisure.
- (i) To promote membership in the American Radio Relay League, with which organization this Association shall, at all times, be affiliated.

(To be continued)

INTRODUCING

Believing it would be of interest to hams to know a little about the men behind the signals, it is our intention to run a series of thumbnail sketches of VE's. Comments on this feature are invited.

VE3SG—F. H. B. Saxon—5 ft. 9 in., 190 pounds, 43. Senior clerk, tax revenue, treasury branch, City of Toronto. Ontario S.C.M., member A.R.R.L. Coordinating Committee, R.M. and O.R.S., N.C.S. Ontario Net, president VE Operators' Association. First licensed same call in 1921. Transmitter 47-46-809.

VE3GT—S. B. Trainer, Jr.—6 ft. 2 in., 180 pounds, 32. Educated Upper Canada School, U. of T. and Harvard. Office manager with dairy company. Ex-S.C.M. Ontario, ex-president Wireless Association of Ontario. Now O.R.S. and R.M., secretary-treasurer VE Operators' Association. A low power advocate, never using over 60 watts input; has won VE, VE/W and topped VE in S.S. Present rig 801 Goyder locked by 59. Conducts radio class for Kiwanis boys.

VE/W CONTEST

The next issue of XTAL will carry a full account of the recent VE/W contest. As we go to press all previous records seem to have been smashed, and in spite of the poor conditions reported from nearly every part of Canada, placing among the high ten seems to have been very spirited. See next XTAL for the full dope.

FIRST VE OPERATORS' QSO PARTY

Date: Saturday, May 28th, 1938.

Time: 6 p.m. EST, May 28th, until 4 a.m. EST, May 29th.

Prize: One KBX 3.5 mc xtal ground to the winner's desired frequency.

Rules: Originate a message to any VE you QSO addressed to the VE Operators' Ass'n, giving time of origin, and in the text give your guess as to the total number of participants you think will be on the air during the party. The person guessing the exact number, or closest to the exact number, shall be the winner. If more than one guess the exact number, the earliest time of origin of the message will determine the winner. After the party send a list of the VEs you worked and a list of those you heard, and also a copy of the message you originated.

This party is open to any VE whether or not he is a member of the VE Operators' Ass'n, a phone operator, or a CW operator.

Bands: Any or all bands may be used.

Post: All reports and messages must be mailed by May 31st.

Purpose: To get the VEs better acquainted. To enable some VE5s to work some VE1s, and vice versa, for the first time.

Call: General call shall be "CQ VE."

The idea is arranged so that you do not need to get in wrong with YL, YF, or the folks. You can be on the air as much or as little as time permits. You can make your QSOs as long or as short as is mutual. If you can have only one QSO do not fail to start your message and mail a copy to the VE Operators' Ass'n. If you have received a message and are unable to QSP, send it along too. The party is in the nature of a contest, yet not a contest. Have you any ideas for contests or parties for the future? How often would you like such a party, or something similar?

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May Day Activity on the 56 MC Band

By VE3IJ

The Toronto and Hamilton district 56 mc gang were out in force for the annual May Day field day. A schedule was arranged which resulted in perfect results on this band, and while the schedule appeared to be quite complicated before the actual tests got under way, the results were surprising in that satisfactory QSO's were established and maintained (for the majority of the time) with surprising ease. If these tests are a forerunner of the advancements being made in this band we can assuredly look forward to working surprising distances on the 56 mc band in the near future.

The majority of the 56 mc group of amateurs have heard the powerful signals of VE3ADO, the station of Harry Lang at Toronto. At any rate, these signals having been reported so consistently from Buffalo and its vicinity, it was decided something be done to determine whether these signals were stable enough for actual message handling, and to start off a message for the Pittsburgh field day group from VE3ADO, who, with the cooperation of W8RV at Buffalo, had previously spent many hours in testing this link in the hook up. From this point a roundabout circuit had also been pre-arranged over stations W8NBV, Silver Creek, N.Y.; W8QKT, Westfield, N.Y.; W8GU, Erie, Pa.; W8BKM, Conneaut, Ohio; W8QKI, Ashtabula, Ohio; W8DEP, Painesville, Ohio; W8VO, Akron, Ohio, who had quite a distance to cover to W8CIR at Cambridge, Pa., and thence to W8NED at Pittsburgh, Pa.

The first message was sent from VE3ADO at Toronto, at 11.15 a.m. E.S.T., to W8RV, at Buffalo. During the handling of this message conditions between these two stations were ideal and no difficulties were encountered in the two-way QSO. From this point until 2 p.m. it was simply a matter of VE3ADO and his associates, Harry Ormsby, VE3KJ, at the receiving end, and A. H. Blevins, VE3IJ, assisted by Sgt. A. Caldwell of the "A" Corps Signals, at the transmitting end, standing by. At 2 p.m. the station of VE3XJ, Hamilton, Ont., operating under the call of VE3KM, assisted by VE3OJ and VE3CJ, was contacted. It appears that, luckily, the Hamilton group were staging a field day of their own, and I repeat luckily, because at this time the Buffalo signals of W8RV had faded con-

siderably. Two messages were handled between VE3ADO and W8RV through VE3KM, these messages being to and from Mr. Kinsley of radio station W8EN at Buffalo. Incidentally, VE3KM reported his location as on Hamilton Mountain. Shortly after this a local station, VE3AIB, was contacted for a short period.

While we cannot give an exact accounting of the operating that was done on the American side, we later received a message from Mobile, W8CIR, at Keyser Ridge, Md., and one from W8EUO, at Wellsburg, W. Va., which had been handled over the following route: W8CIR, QKV, BDG, KG, CPI, KLO, QKI, GU, QKT, NBV, RV and VE3ADO. To the best of our knowledge, these are the first messages which have been interchanged between points in Ontario and points in Maryland and West Virginia over the 56 mc band.

We would like to add that there are several stations who are anxious for outside contacts on the 56 mc band, namely: VE3ABZ, Guelph, Ont.; VE3SM, Galt, Ont.; VE3HX and VE3YQ at Brantford, Ont. If any amateurs operating on this band would like to contact these stations we suggest that they get in touch with them direct.

And, in concluding, our thanks to the many assisting amateurs of whom we have no record, and the untiring efforts of the American group.

Recently about a dozen certificates were dug out of the log book, call book, envelopes, and here and there at this station. The cost of frames was figured up, and then a 12 x 14 photo album was purchased at Woolworth's for 40 cents. The use of rubber cement rather than photo paste is recommended. It is possible, if changes are made, to remove certificate from the page, "roll" off old cement, and both page and certificate are good as new.—VE3ZE.

HOLIDAYS

In order that you can receive your copies of XTAL without delay while you are on summer holidays or at a different QRA, please drop a card to XTAL stating where you wish XTAL sent and for how long.

JULY 1st, 1938

(Continued from page 5)

the diode meter, to get proper operation of the complete unit. This is usually done by close coupling to the feeders, being careful that the pick-up is from the antenna alone, and not from other circuits. Note, also, that a good ground should be used.

If the panel room is not a handicap, another Magic Eye can be used to operate direct on the modulated amplifier indicating carrier cut off from overmodulation. With this arrangement, when overmodulation occurs, the peak modulator A.C. voltage developed becomes higher than the D.C. plate voltage allowing current to pass through the rectifier, which is indicated on the Magic Eye.

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HAMFESTS

Calling all hams to the hamfest on Sept. 3, 4 and 5 by the East Kootenay Amateur Radio Association at Cranbrook, near Banff, Lake Louise, Radium Hot Springs.

Attractions: Big get-together; visit to largest lead, zinc and silver mine in world at Kimberley; prizes; sports; amusements; also Cranbrook's 40th anniversary celebrations.

For further information write to Mrs. K. R. Barber, VE5SI.

The "Loyalist City Amateur Radio Club" is sponsoring the 1938 Annual Maritime Amateur Radio Convention, to be held in Saint John, N.B., during Labor Day week-end, September 3, 4 and 5.

Every effort is being directed towards making this the most attractive convention ever held in the Maritimes, and to this end we are looking forward to the co-operation of every ham who has amateur radio at heart, both in and out of the Maritimes.

This convention has been approved by the A.R.R.L., and is to be recognized as an official A.R.R.L. Divisional Convention.

Suitable accommodation at reduced rates will be arranged for, and everything is being considered with a view to making your visit comfortable, happy and interesting. Endeavour to arrange your vacation with a view to paying us a visit and taking in this convention. You will not regret it. Bring your YL and XYL along—we are planning to take good care of the ladies.

Notices regarding registration fee, etc., will be sent out later. It will help materially to know how many to expect. Please drop us a note advising whether we can look forward to seeing you.

BUY, SELL, OR SWAP

VE2AA Surplus Gear Exchange, or Sell Swap Lists.

2 Brand New Taylor 866's, \$3.00 pr. VE3AU, Randolph 5987.

WILL SELL Complete low power C.W. and fone transmitter. Here's a chance to save some money. Will be on the air on 75 meter fone every night from 7 to 8. Write for particulars. Am in the market to buy higher power fone equipment. G. H. Hardy, Grand Valley, Ont., VE3NG.



On Rhombic Antennae

For those who have the space, three rhombic antennae can be put up for the same cost as the addition of a high-power final amplifier to the transmitter. Maintenance and operating costs of the antennae are nil. In addition, the effectiveness of the receiver is increased tremendously on the beam.

We have developed a range of high-power resistors for specific use in terminating rhombics. Ask your jobber for information on this new addition to the IRC specialized line, or write us direct.

You may read a more extensive outline of Rhombic Antennae by I.R.C. on page 83 of the May issue of QST

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